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**Unno et al.**

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[54] **ON-VEHICLE SOUND CONTROL APPARATUS**

**FOREIGN PATENT DOCUMENTS**

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[57] **ABSTRACT**

An electric source signal supplied from a battery of a vehicle is composed of a direct current component and an alternating current component. The alternating component is classified into an alternator noise of which a frequency changes in proportional to an engine speed of the vehicle and other noises. Also, as the engine speed is heightened, a vehicle noise in the inside of the vehicle is heightened. The direct current component of the electric source signal is removed in an alternating current component passing circuit, the other noises are removed in a band pass filter, and the alternator noise is obtained. Thereafter, a frequency of the alternator noise is calculated in a microcomputer, and a volume of a sound reproduced by a speaker of an on-vehicle stereo and a tone of the sound are adjusted according to the frequency of the alternator noise. Therefore, a driver can be entertained with a music without being disturbed by the vehicle noise.

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[51] **Int. Cl.** <sup>6</sup> ..... G10K 11/16

[52] **U.S. Cl.** ..... 381/86; 381/94; 381/71

[58] **Field of Search** ..... 381/71, 94, 86

[56] **References Cited**

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**10 Claims, 4 Drawing Sheets**

